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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/703,390	11/07/2003	Peter John van den Brink	903-91 PCT/US/CIP	9998
23869	7590	07/10/2008	EXAMINER	
HOFFMANN & BARON, LLP 6900 JERICHO TURNPIKE SYOSSET, NY 11791			LEVKOVICH, NATALIA A	
		ART UNIT	PAPER NUMBER	
		1797		
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		07/10/2008	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/703,390	VAN DEN BRINK ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	NATALIA LEVKOVICH	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 10 April 2008.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 14-16 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-13 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ .  | 6) <input type="checkbox"/> Other: _____ .                        |

**DETAILED ACTION**

***Response to Amendment***

1. Applicant's amendments and remarks dated 04/10/2008 have been acknowledged.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.

***Claim Rejections - 35 USC § 112***

3. The 35 U.S.C. 112, first paragraph, rejection of claim 10 is withdrawn, in view of the clarifications provided by the Applicant.
4. Claims 1-13 remain rejected under 35 U.S.C. 112, second paragraph, as being unclear for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As was pointed out previously, claim 1 recites the 'first channel having a wall, a first channel opening, opening in a first face of the base block, and a second channel opening, opening in a second face of the base block'. It is not quite clear whether or not two or four openings are meant. Examiner maintains that it is unclear whether or not the first channel opening is the same as the opening in a first face and whether or not the second channel opening is the same as the opening in a second face. Thus, the limitation is confusing because it is not quite clear whether or not two or four openings are meant.

***Claim Rejections - 35 USC § 102***

5. Claims 1, 3-6 and 10-13 are rejected under 35 U.S.C. 102(b) as anticipated by Juranas (US 5709840).

Juranas, discussed previously, discloses a reaction system comprising, as illustrated in Figure 5, housing 10 ['base block'] removably accommodating tubular through vessel 76; sealing members 52, 50 ['first and second sealing elements']; plug 60 ['cover'] with channel 62 ['third channel']; vertical channel 16 ['first channel'] having an upper opening ['first channel opening '] on the top surface ['first face'] of the block and a lower opening ['second channel opening '] on the bottom surface ['second face'] of the block (the diameter of channel 16 exceeding that of the 'vessel' such that there is a gap between the channel and the vessel); and channel 18 ['forth channel'] which opens into the gap between the second sealing member 50 and the second [lower] channel opening of the "first" channel 16.

***Claim Rejections - 35 USC § 103***

6. Claims 2 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Juranas.

Regarding claim 2, although Juranas does not specify the size of the gap, it would have been within the ordinary skill of an artisan at the time the invention was made to have modified this parameter in the apparatus of Juranas such that the size of the gap would have an optimal value, in order to comply with sealing requirements on one hand, and for the ease of maintenance, on the other hand.

With respect to claim 7, Juranas does not teach means for heating. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed heaters in the system of Juranas, in order to provide required temperature conditions for the synthesis.

As to claims 8-9, although Juranas does not teach multiple reactors along with corresponding channels, it would have been clearly within the ordinary skill of an artisan at the time the invention was made to have arranged a plurality of such structures in the modified apparatus of Juranas, in order to increase the productivity of the system. It would have been also obvious to have employed a single cover, in order to increase stability of the system and for the ease of maintenance.

#### ***Double Patenting***

7. Claims 1-13 remain provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 51, 70-71 and 73-78 of copending Application No 10/ 477030. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are directed to a structure comprising a housing with a vertical bore [first channel'] for receiving a tubular through vessel; a cover with an opening [third channel']; a first sealing located between the cover and the top of the block;, a second sealing located in the bore for sealing the annular gap between the vessel and the bore, a gas feed channel [second channel'] and a further fluid channel ['forth channel'] which opens into the gap between the second sealing and outlet ['second'] opening of the first channel.

Thus, all the limitations of the instant claims are entirely within the scope of the copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Response to Arguments***

8. Applicant's arguments dated 04/10/2008 have been fully considered but they are not persuasive.

Applicant argues that tubes 76 and 78 of Juranas are "not used as reaction vessels". Examiner notes that the tubes have the structure which completely satisfies the limitations of the instant claims (that is, these are "tubular vessels having a first vessel opening and a second vessel opening at opposite ends thereof allowing a flow of fluid through said vessels". The tubes can be employed for the intended use as claimed.

Applicant further argues that tube 78 "does not qualify as a tubular vessel" of claim 1, since the "first channel is only present around tube 76". Examiner notes that having tube 76 being surrounded by channel 16 ['first channel'] is sufficient to read on the limitations of claim 1.

Applicant further argues that "channel 18 cannot be regarded as the fourth channel, as it does not open into the gap between the second sealing element (reference numeral 50 according to the Examiner) and the second channel opening (the Examiner regarding channel 72 as the second channel). Examiner notes that, as noted by Applicant, the instant claims recite the forth channel configured to open "into

the gap between the second sealing element and the second channel opening" of the first channel. As was shown above, this is exactly the case with the structure of Juranas (see Figure 5).

Applicant further argues that "the function of the second channel is to feed a fluid (preferably a gas) into the tubular vessel. The fluid present in channel 72 of Juranas cannot enter into the hollow needle 76. Therefore, channel 72 of Juranas cannot be regarded as a second channel". Examiner would like to remind that the instant claims only recite the second channel "connecting to the first channel between the second sealing element and the first channel opening". Figure 5 shows that channel 72 opens into the vertical channel 16 between the sealing member 50 and the upper opening ['first channel opening '] of the first channel, as recited in the claims.

Applicant further argues that "channel 62 in Juranas cannot be used to feed liquid in tube 76 or 78. Therefore, channel 62 cannot be regarded as a third channel as recited in the claims". Examiner would like to draw Applicant's attention to the exact recitation of the instant claims. The claims currently recite the third channel merely being in fluid communication with the "at least one first channel in the base block".

Figure 5 shows channel 62 fluidically connected to channel 16.

Applicant also argues that the "reactor flask according to the Juranas document has a different setup than the system as recited in the claims. In the Juranas reactor flask, the reaction takes place in the conical reactor vessel 30. There is no disclosure whatsoever that this reactor vessel is placed in a reactor block and that there are

channels provided within the reactor block to supply fluids to an annular gap which extends outside the reactor vessel and inside the reactor block".

Examiner notes that , as was shown above, tube 76 has a structure which reads on the tubular vessel of the instant claims and is totally capable of being used as a reactor.

The flask was not recited in the rejection. Examiner maintains that the structure of Juranas includes all the elements of the instant claims, as was discussed above.

Applicant traverses the nonstatutory obviousness-type double patenting rejection on the grounds that the co-pending application 10/477,030 is directed to "evaporation of any liquid that enters the reactor vessel. This is an issue that is totally different from the issue that is the subject of this application". Examiner strongly disagrees. As was shown above, both sets of claims recite a structure comprising a housing with a vertical bore [first channel'] for receiving a tubular through vessel; a cover with an opening [third channel']; a first sealing located between the cover and the top of the block;; a second sealing located in the bore for sealing the annular gap between the vessel and the bore, a gas feed channel [second channel'] and a further fluid channel ['forth channel'] which opens into the gap between the second sealing and outlet ['second'] opening of the first channel. Thus, all the limitations of the instant claims are entirely within the scope of the copending application. Examiner maintains the ODP rejection.

### ***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Natalia Levkovich whose telephone number is 571-272-2462. The examiner can normally be reached on Mon-Fri, 2 p.m.-10 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Jill Warden/  
Supervisory Patent Examiner, Art Unit 1797